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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,911	04/03/2001	Shinichiro Haruyama	7217/64309	2107

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EXAMINER	
PAYNE, DAVID C	
ART UNIT	**PAPER NUMBER**
2633	7

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/824,911	SHINICHIRO	
	Examiner	Art Unit	
	David C. Payne	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 May 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,9-18 and 23-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,9-16,18,23,24,26-28 and 30-32* is/are rejected.

7)☒ Claim(s) *3,17,25,29 and 33* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 2, 4, 9-16, 18, 23, 24, 26-28, and 30-32 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 11 recites the limitation "The receiving apparatus as set forth in claim," in the preamble. There is insufficient antecedent basis for this limitation in the claim. Applicant has not specified a parent claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2, 9-11, 13, 15, 16, 23, 24, 27, 28, 31 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Kartalopoulos US 6,731,875 B1 (Kartalopoulos).

Re claims 1, 2 (as understood based on the 112 rejection), Kartalopoulos disclosed

A receiving apparatus for receiving optical information sue, comprising:

a light receiving element array having a plurality of light receiving elements arranged in an array for receiving the optical information that: is dispersed within a spatially predetermined range and that corresponds to a plurality of bits of parallel data fed to a plurality of light emitting diodes arranged in an array and for outputting a plurality of electric signals at levels corresponding to amounts of light in the received optical information, wherein the light receiving elements output the plurality of electric signals in parallel; and

an information extraction circuit for receiving the plurality of electric signals output in parallel from the light receiving element array and extracting information in accordance with the optical information signal based on the plurality of electric signals.

(see e.g. Figures 4 and 7, col./line: 4/15-25, 5/15-25, 4/45-60).

Re claim 13 Kartalopoulos disclosed

A transmitting apparatus,

comprising: a conversion circuit for converting serially input data to a plurality of bits of parallel data giving predetermined information; and a light emitting diode array having a number plurality of light emitting diodes corresponding to a number of bits of parallel data from the conversion circuit and being arranged in an array, wherein the respective light emitting diode units are controlled in light emission in parallel based on bit information of the corresponding parallel data to emit optical information in the form of a light beam dispersed in a spatially predetermined range. (see e.g. Figures 4 and 7, col./line: 4/15-25, 5/15-25, 4/45-60).

Re claims 15, 16 Kartalopoulos disclosed

A communication system, comprising:

a transmitting apparatus for transmitting optical information in the form of a light beam dispersed in a spatially predetermined range formed by an array of a plurality of light emitting diodes corresponding to a number of bits of parallel input data, wherein a level of light emission from the plurality of light emitting diodes is in accordance with bit information of the parallel input data; and

a receiving apparatus including a light receiving element array having a plurality of light receiving elements arranged in an array for receiving the light beam and outputting a plurality of electric signals at levels corresponding to amounts of light received, wherein the light receiving elements output electric signals in parallel, and an information extraction circuit for receiving a plurality of electric signals output in parallel from the light receiving element array and extracting information in accordance with the optical information signal based on the plurality of

electric signals. (see e.g. Figures 4 and 7, col./line: 4/15-25, 5/15-25, 4/45-60).

Regarding claims 9-11, 23, 24, 31, and 32

Kartalopoulos disclosed a binarizing circuit for binarizing the plurality of electric signals from the light receiving element array; a data selection circuit for selecting data corresponding to the optical information signal from the plurality of binarized electric signals from the binarizing circuit (e.g., Kartalopoulos e.g., Figure 7 #420).

a conversion circuit for converting serially input data to a plurality of bits of parallel data respectively giving predetermined information; Figure 7 #405, Figure 4 #305).

Re claims 27, 28 Kartalopoulos disclosed

A communication system, comprising: a transmitting apparatus having a conversion circuit for converting serially input data to a plurality of bits of parallel data and a light emitting diode array having a plurality of light emitting diodes corresponding to the plurality of bits of parallel data from the conversion circuit, wherein the light emitting diodes are arranged in an array and are respectively controlled in light emission in parallel based on bit information of the corresponding plurality of bits of parallel data to emit optical information in the form of a light beam dispersed in a spatially predetermined range; and a receiving apparatus including a light receiving element array having a plurality of light receiving elements arranged in an array for receiving the light beam outputting a plurality of electric signals at levels corresponding to amounts of light received, wherein the light receiving elements output a plurality of electric signals in parallel, and an information extraction circuit for receiving the plurality of electric signals output in

parallel from the light receiving element array and extracting information in accordance with the optical information based on the plurality of electric signals.

(see e.g. Figures 4 and 7, col./line: 4/15-25, 5/15-25, 4/45-60).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 4, 12, 14, 18, 26 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kartalopoulos US 6,731,875 B1 (Kartalopoulos) in view of Hovorka et al. US 6,504,633 B1 (Hovorka).

Re claims 4, 14, 18 and 30, Kartalopoulos does not disclose the receiving apparatus further comprising wherein a wavelength of the optical information is within a visible wavelength range. Hovorka disclosed transmitting optical signals in visible wavelength range (see Hovorka Col. 5, lines 45-55). It would have been obvious to one of ordinary skill in the art the time of invention to transmit light in the visible range as this range is well known and useful for transmitting data.

Regarding claim 12, 26

Kartalopoulos disclosed a binarizing circuit for binarizing the plurality of electric signals from the light receiving element array; a data selection circuit for selecting data corresponding to the optical information signal from the plurality of binarized electric signals from the binarizing circuit (e.g., Kartalopoulos e.g., Figure 7 #420).

a conversion circuit for converting serially input data to a plurality of bits of parallel data respectively giving predetermined information; Figure 7 #405, Figure 4 #305).

Allowable Subject Matter

9. Claims 3, 17, 25, 29 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Payne whose telephone number is (703) 306-0004. The examiner can normally be reached on M-F, 7a-4p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (703) 305-4729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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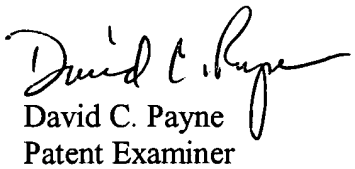

David C. Payne
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